

# Overview

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# Major Themes

- Integration of assessment and management
  - Shared understanding of goals and identification of assessment questions
  - Tiered approaches – including triage
  - Multiple types of linkages between assessment and remedial decisions
- Role of guidelines – screening and possible use as part of W-O-E; tools used at each tier should reduce uncertainty while guarding against false negatives

# Major Themes

- W-O-E as a tool for assessment and for remedy selection
  - Structure (various approaches)
  - Measurements
  - Models
  - Non-ecological endpoints
  - Economic evaluations (dollars and ecological metrics)

**How do we translate all this into  
understandable guidance?**

# Major Themes

- Identifying, characterizing, and managing uncertainty
  - Tools are available
  - This is a key component of a tiered and W-O-E methodology

# Major Themes

- Decision Frameworks
  - Many good ideas being developed
  - Key questions are being identified
  - *Better integration of assessment and decisions with multiple bridges*
  - *How are those bridges constructed*
  - Recognition of the importance of time and space scales
  - Recognition of constraints
  - Using economic tools
  - Role of stakeholders

# Some Questions

- How do I deal with small sites typical of those left to the states to deal with?
- Where in the process are the “principles” appropriately considered?
- How should “weighing” be carried out and how do we guard against losing information?

# Some Questions

- If “reference areas” are an important aspect for evaluation and remediation, what factors need to be considered in their selection?
- The idea of comparative assessments is attractive but can we really do it? For what types of problems does this make sense?
- How do we ensure that field biology information is collected and evaluated in a useful way?

# Questions

- What steps are needed to ensure that stakeholders have an opportunity to be involved in the process?



# The Questions

- Do we have the tools for conducting the assessments?
  - Benthic invertebrate evaluations – yes but some are in development
  - Wildlife – limited, we rely primarily on exposure models and comparisons of exposure to toxic reference values; work is needed and underway on refining this approach. Other W-O-E tools may be available.

# Question 2

- Do risk assessors know how to properly interpret the results of these tests and studies and use them to help select ....
  - Various W-O-E methodologies are being developed and these can help form the basis of guiding what makes sense to do. A work in progress with many remaining management and assessment questions.
  - Risk methodologies may need to be better integrated into a decision framework.
  - More guidance is needed for both the assessor and manager.

# Question 3

- Are risk managers provided the short-term and long-term risk information they need to make appropriate risk-based decisions?
  - Efforts are underway to develop appropriate risk and management frameworks for sediments; good ideas are now available from several sources.
  - Economic tools may be helpful as additional lines of evidence.
  - Efforts are likely still needed to know when it is important to capture the big picture and how best to do that.

# Next Steps

- [www.epa.gov/osp/sediments](http://www.epa.gov/osp/sediments)
- Workshops like this?
- Fact sheets?
- Case study reviews?
- Round robin of risk assessors and managers type workshop or effort

